

FY09 Plan for **Open Science Grid Storage Extensions (OSGStorEx)**

Prepared by: Ted Hesselroth

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Relevant Strategic Plans – Computing Division (**CD**), Scientific Facilities (**SCF**), Data Storage and Caching (**DSC**), Grids (**Grid**)

OSGStorEx. Tactical Objectives for FY09

- Enable increased use of opportunistic storage.
- Deliver Bestman¹ gratia storage probes for VDT² release.
- Maintain and support community provided storage operations tool kit³.

OSGStorEx Tasks –

The proposed activity tasks **OSGStorEx** for effort in FY09 are:

- Activity type: Project
- Milestones:
 - Develop web interface for SE⁴ discovery and authorization check (7/10/09), and space reservation management (9/30/09).
 - Consolidate Storage Element monitoring functionalities into one coherent interface (9/30/09).
 - Develop software to match storage attributes of a job to a SE (9/30/09).
 - Incorporate Bestman (1/2/09) and xrootd⁵ (4/3/09) into OSG monitoring and information service infrastructure.
 - First version of maintenance notification software for Storage Elements with status discoverable by job submission tools (4/3/09).
- Metrics: Weekly OSG storage activities meeting minutes and mail group
 - Proportion of sites currently using Bestman or xrootd which eventually deploy new monitoring and information service components.
 - Number of VO⁶s using new discovery tools in their workflows.
 - Operations toolkit releases.
 - Hit rate of new monitoring interface.

¹ [Berkeley Storage Manager](#). An [SRM](#)-compatible Storage Element implementation from [Lawrence Berkely Laboratory](#).

² [Virtual Data Toolkit](#). A collection of grid-specific software. Basis of [Open Science Grid](#) stack.

³ [Open Science Grid Storage Operations Toolkit](#). A collection of contributed tools for Storage Elements on the [Open Science Grid](#).

⁴ [Storage Element](#). Site-level storage deployment for OSG. Analog of [Compute Element](#)

⁵ [xrootd](#). A file-serving software suite from [Stanford Linear Accelerator](#).

⁶ Virtual Organization. An entity representing participants of an experiment or collaboration to the grid.

OSGStorEx .Priorities -

Priorities are:

1. Provide support for space-reservation based opportunistic storage.
2. Deployment of xrootd and Bestman with full OSG capabilities.
3. Support operations tools package

Staffing Issues: Staff for OSG Storage Extensions is provided by Matt Crawford (25%) and Ted Hesselroth (50%).

Change Control: Changes to the Work Program require the approval of the Fermilab OSG coordinator and the WBS leader of these projects. Changes to this plan will be filed as a formal change request through the appropriate CD and OSG line management.

Risk Assessment:

These objectives are important to meet the obligations to the for OSG Storage Extensions effort.

1. The lack of coherent information about available opportunistic storage will hinder utilization of OSG resources designated for VOs storage needs. Inaccurate GIP⁷ storage information could lead to failure of this goal.
2. Failure to enable full deployment of xrootd and Bestman in OSG will not affect the ability of sites to install the software, but will result in diminished monitoring and discovery capabilities. Capability for operational support will be lessened.
3. Failure to increase ease-of-use for opportunistic storage through monitoring and web interfaces may result in decreased human efficiencies and greater operational cost, and possible lack of utilization.

⁷[Generic Information Provider](#). Collector of data to be published on OSG's information service.